Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1756mja

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page for STN Seminar Schedule - N. America
NEWS 2	JAN 02	STN pricing information for 2008 now available
NEWS 3	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS 4	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS 5	JAN 28	MARPAT searching enhanced
NEWS 6	JAN 28	USGENE now provides USPTO sequence data within 3 days of publication
NEWS 7	JAN 28	TOXCENTER enhanced with reloaded MEDLINE segment
NEWS 8	JAN 28	MEDLINE and LMEDLINE reloaded with enhancements
NEWS 9	FEB 08	STN Express, Version 8.3, now available
NEWS 10	FEB 20	PCI now available as a replacement to DPCI
NEWS 11	FEB 25	IFIREF reloaded with enhancements
NEWS 12	FEB 25	IMSPRODUCT reloaded with enhancements
NEWS 13	FEB 29	WPINDEX/WPIDS/WPIX enhanced with ECLA and current U.S. National Patent Classification
NEWS 14	MAR 31	IFICDB, IFIPAT, and IFIUDB enhanced with new custom IPC display formats
NEWS 15	MAR 31	CAS REGISTRY enhanced with additional experimental spectra
NEWS 16	MAR 31	CA/CAplus and CASREACT patent number format for U.S. applications updated
NEWS 17	MAR 31	LPCI now available as a replacement to LDPCI
NEWS 18	MAR 31	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 19	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS 20	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS 21	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS 22	APR 28	IMSRESEARCH reloaded with enhancements
NEWS 23	MAY 30	INPAFAMDB now available on STN for patent family searching
NEWS 24	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS 25	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS 26	JUN 06	KOREAPAT updated with 41,000 documents
NEWS 27	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS 28	JUN 19	CAS REGISTRY includes selected substances from web-based collections
NEWS 29	JUN 25	CA/CAplus and USPAT databases updated with IPC reclassification data
NEWS 30	JUN 30	AEROSPACE enhanced with more than 1 million U.S. patent records
NEWS 31	JUN 30	EMBASE, EMBAL, and LEMBASE updated with additional options to display authors and affiliated organizations
NEWS 32	JUN 30	STN on the Web enhanced with new STN AnaVist Assistant and BLAST plug-in

NEWS 33 JUN 30 STN AnaVist enhanced with database content from EPFULL

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 15:52:57 ON 24 JUL 2008

=> file reg
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 0.21 0.21

FILE 'REGISTRY' ENTERED AT 15:53:17 ON 24 JUL 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 JUL 2008 HIGHEST RN 1035697-56-3
DICTIONARY FILE UPDATES: 23 JUL 2008 HIGHEST RN 1035697-56-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

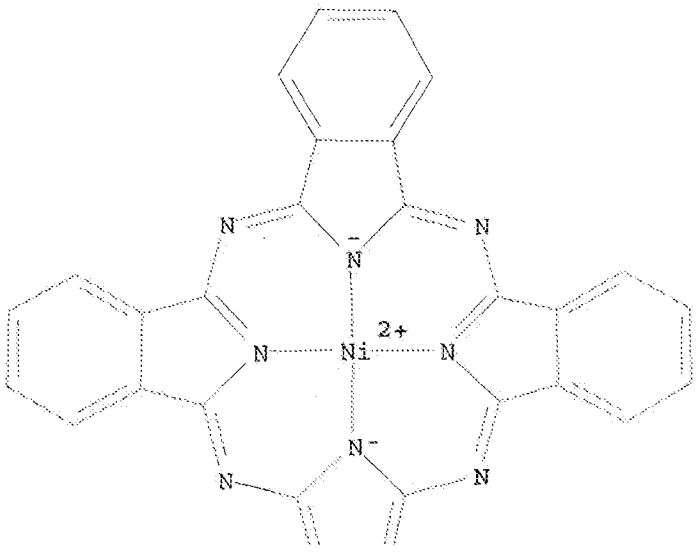
http://www.cas.org/support/stngen/stndoc/properties.html

=> phthalocyanine
PHTHALOCYANINE IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

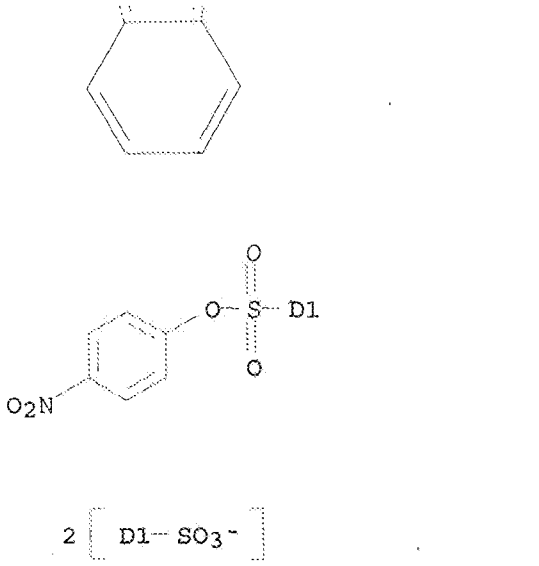
=> s phthalocyanine
L1 17947 PHTHALOCYANINE

=> s (phthalocyanine or phthalocyanato)
17947 PHTHALOCYANINE
13 PHTHALOCYANATO
L2 17948 (PHTHALOCYANINE OR PHTHALOCYANATO)

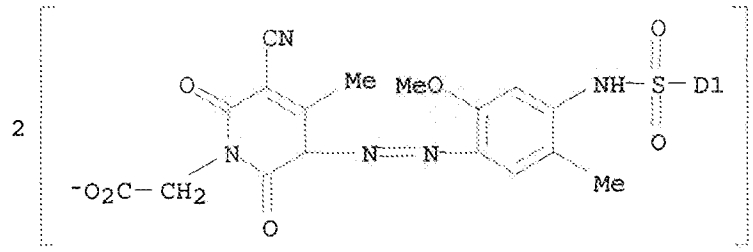
```
=> s l2 and cobalt
        321029 COBALT
L3        1578 L2 AND COBALT

=> s l2 and (water or ethanol or methanol or pyridine)
          2990 WATER
           102 WATERS
          3091 WATER
                 (WATER OR WATERS)
        268924 ETHANOL
        345146 METHANOL
       1074011 PYRIDINE
             3 PYRIDINES
       1074011 PYRIDINE
                 (PYRIDINE OR PYRIDINES)
L4         613 L2 AND (WATER OR ETHANOL OR METHANOL OR PYRIDINE)

=> s l4 and (isocyanat? or cyano)
        114966 ISOCYANAT?
        885200 CYANO
L5          30 L4 AND (ISOCYANAT? OR CYANO)

=> d scan 1-10
'1-10' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

L5   30 ANSWERS   REGISTRY  COPYRIGHT 2008 ACS on STN
IN   Nickelate(4-), [[3,3'-[[C-[(4-nitrophenoxy)sulfonyl]-C,C-disulfo-
     29H,31H-phthalocyanine-C,C-diyl]bis[sulfonylimino(2-methoxy-5-methyl-4,1-
     phenylene)azo]]bis[5-cyano-3,6-dihydro-4-methyl-2,6-dioxo-1(2H)-
     pyridineacetato]](6-)-N29,N30,N31,N32]- (9CI)
MF   C72 H45 N19 Ni O25 S5
CI   CCS, IDS, COM
```

PAGE 2-A



PAGE 3-A



The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN
SAM - Index Name, MF, and structure - no RN
FIDE - All substance data, except sequence data
IDE - FIDE, but only 50 names
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
SQD - Protein sequence data, includes RN
SQD3 - Same as SQD, but 3-letter amino acid codes are used
SQN - Protein sequence name information, includes RN

EPROP - Table of experimental properties
PPROP - Table of predicted properties
PROP - EPROP, ETAG, PPROP and SPEC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract
APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

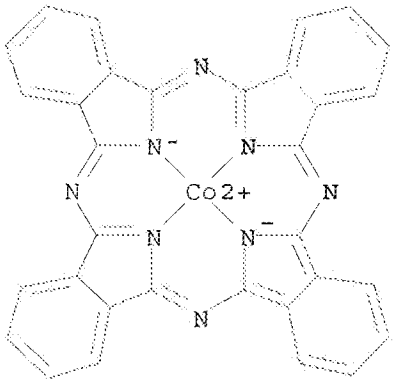
The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

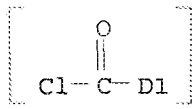
HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L5 30 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Cobalt, [29H,31H-phthalocyanine-C,C,C,C-tetracarbonyl tetrachloridato(2-)-N29,N30,N31,N32]-, polymer with 1,6-diisocyanatohexane and 2,2'-[oxybis(2,1-ethanediyloxy)]bis[ethanol] (9CI)
MF (C36 H12 Cl4 Co N8 O4 . C8 H18 O5 . C8 H12 N2 O2)x
CI PMS

CM 1



4



CM 2

OCN— $(CH_2)_6$ — NCO

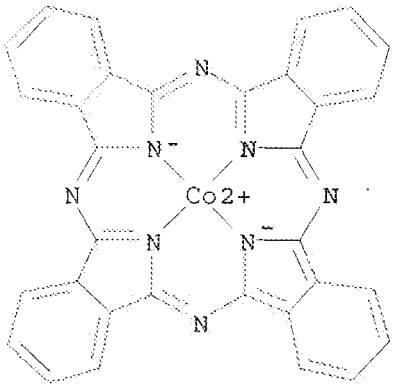
CM 3

HO— CH_2 — CH_2 — O— CH_2 — CH_2 — O— CH_2 — CH_2 — O— CH_2 — CH_2 — OH

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L5 30 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Cobalt, [29H,31H-phthalocyanine-C,C-dicarbonyl dichloridato(2-)-N29,N30,N31,N32]-, polymer with 1,6-diisocyanatohexane, 2,2'-[1,2-ethanediylbis(oxy)]bis[ethanol] and 1,6-hexanediol (9CI)
MF (C34 H14 Cl2 Co N8 O2 . C8 H12 N2 O2 . C6 H14 O4 . C6 H14 O2)x
CI PMS

CM 1



2 [O ‖ Cl— C— D1]

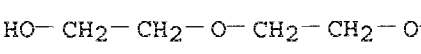
CM 2

OCN— $(CH_2)_6$ — NCO

CM 3

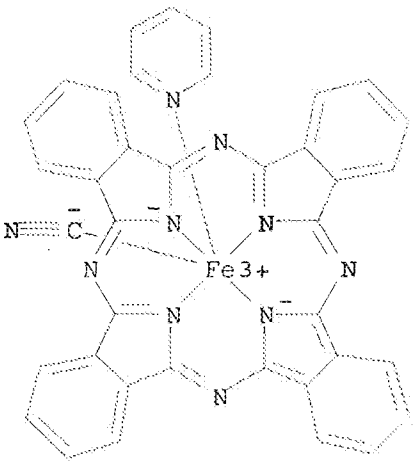
HO— $(CH_2)_6$ — OH

CM 4



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L5 30 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Iron, (cyano-C)[29H,31H-phthalocyaninato(2-)-
N29,N30,N31,N32](pyridine)-, (OC-6-14)- (9CI)
MF C38 H21 Fe N10
CI CCS



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> d his

(FILE 'HOME' ENTERED AT 15:52:57 ON 24 JUL 2008)

FILE 'REGISTRY' ENTERED AT 15:53:17 ON 24 JUL 2008
L1 17947 S PHTHALOCYANINE
L2 17948 S (PHTHALOCYANINE OR PHTHALOCYANATO)
L3 1578 S L2 AND COBALT
L4 613 S L2 AND (WATER OR ETHANOL OR METHANOL OR PYRIDINE)
L5 30 S L4 AND (ISOCYANAT? OR CYANO)

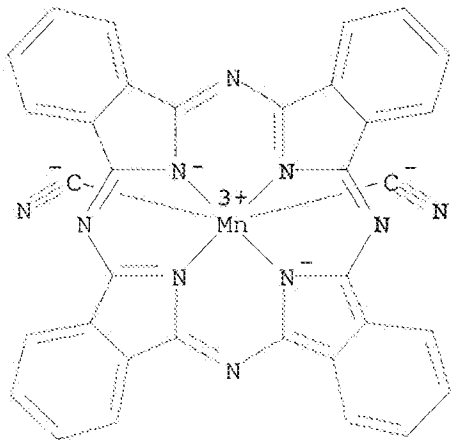
=> l5 not polymer
L5 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l5 not polymer
953867 POLYMER
16464 POLYMERS
964196 POLYMER
(POLYMER OR POLYMERS)
L6 15 L5 NOT POLYMER

=> d scan

L6 15 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Manganate(1-), bis(cyano-C)[29H,31H-phthalocyaninato(2-)-
    N29,N30,N31,N32]-, (OC-6-12)-, potassium, compd. with ethanol (1:2)
    (9CI)
MF C34 H16 Mn N10 . 2 C2 H6 O . K

    CM 1



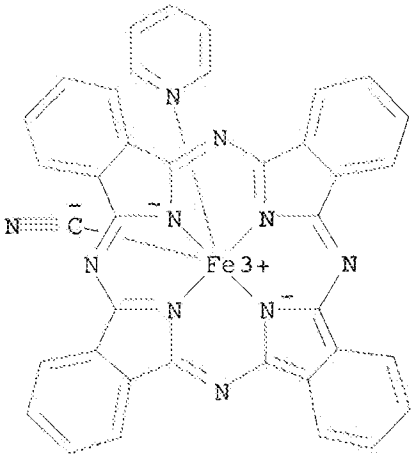
● K^+

    CM 2

H_3C-CH_2-OH

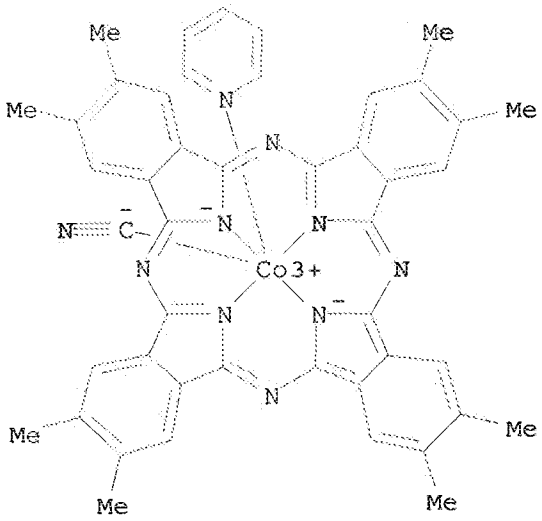
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L6 15 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Iron, (cyano-C)[29H,31H-phthalocyaninato(2-)-
    N29,N30,N31,N32](pyridine)-, (OC-6-14)- (9CI)
MF C38 H21 Fe N10
CI CCS



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L6 15 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Cobalt, (cyano-C)[2,3,9,10,16,17,23,24-octamethyl-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32](pyridine)-, (OC-6-14)- (9CI)
MF C46 H37 Co N10
CI CCS



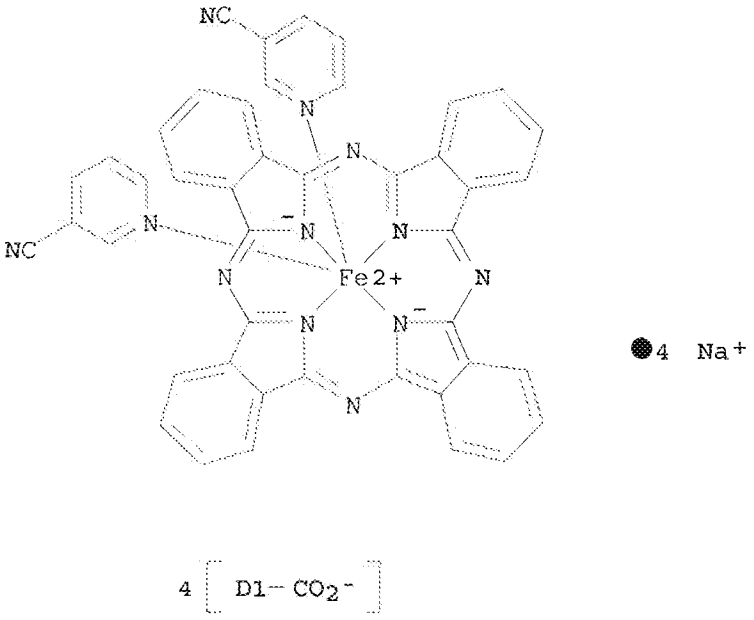
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L6 15 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Iron, ammine[μ-(cyano-C:N)]bis[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32](pyridine)di- (9CI)
MF C70 H40 Fe2 N19
CI CCS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

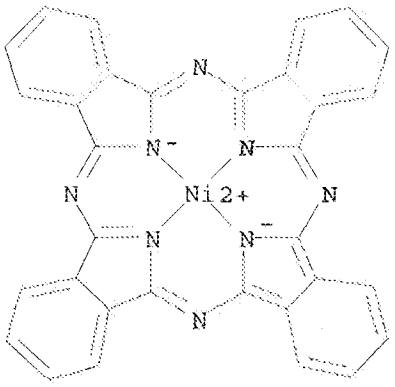
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L6 15 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Ferrate(4-), [29H,31H-phthalocyanine-C,C,C,C-tetracarboxylato(6-)-N29,N30,N31,N32]bis(3-pyridinecarbonitrile-N1)-, tetrasodium (9CI)
MF C48 H20 Fe N12 O8 . 4 Na
CI CCS, IDS

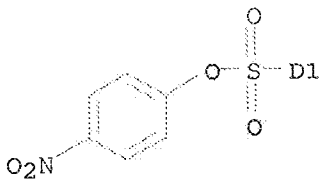


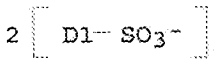
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L6 15 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Nickelate(4-), [[3,3'-[[C-[(4-nitrophenoxy)sulfonyl]-C,C-disulfo-29H,31H-phthalocyanine-C,C-diyl]bis[sulfonylimino(2-methoxy-5-methyl-4,1-phenylene)azo]]bis[5-cyano-3,6-dihydro-4-methyl-2,6-dioxo-1(2H)-pyridineacetato]](6-)-N29,N30,N31,N32]-, tetrasodium (9CI)
MF C72 H45 N19 Ni O25 S5 . 4 Na
CI CCS, IDS

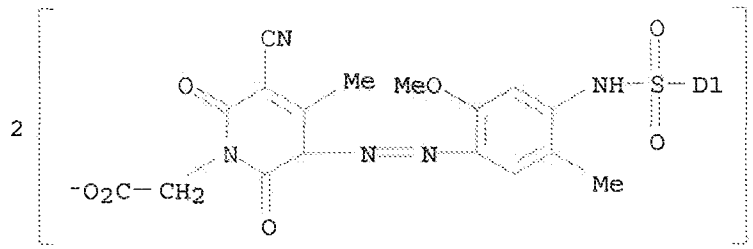


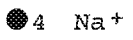
PAGE 2-A





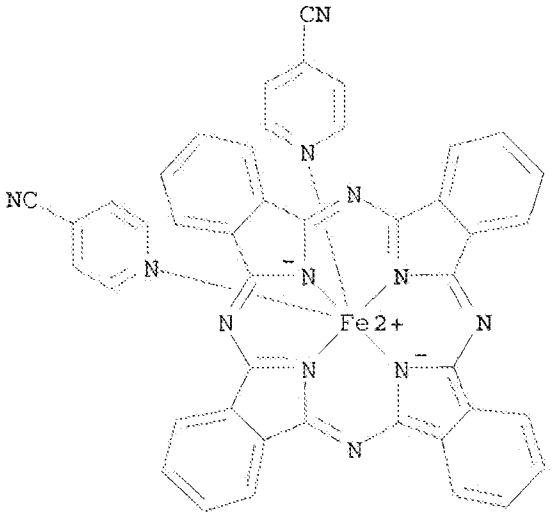
PAGE 3-A





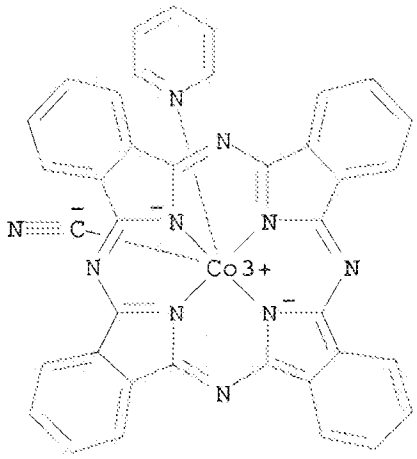
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L6 15 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Iron, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]bis(4-pyridinecarbonitrile-N1)-, (OC-6-12)- (9CI)
MF C44 H24 Fe N12
CI CCS, COM



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

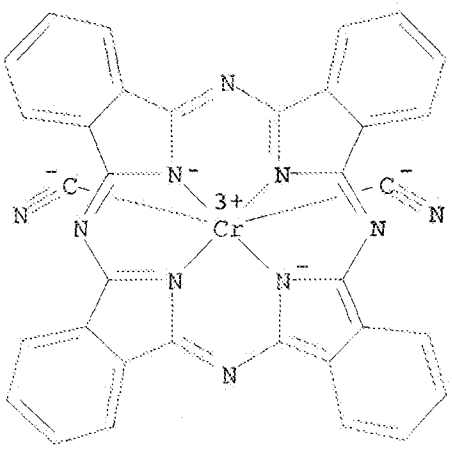
L6 15 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Cobalt, (cyano-C)[29H,31H-phthalocyaninato(2-)-
N29,N30,N31,N32](pyridine)-, (OC-6-14)- (9CI)
MF C38 H21 Co N10
CI CCS



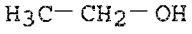
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L6 15 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Chromate(1-), bis(cyano-C)[29H,31H-phthalocyaninato(2-)-
N29,N30,N31,N32]-, (OC-6-12)-, sodium, compd. with ethanol (1:1),
dihydrate (9CI)
MF C34 H16 Cr N10 . C2 H6 O . 2 H2 O . Na

CM 1



CM 2



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

```
=> s l6 and cobalt
         321029 COBALT
L7             4 L6 AND COBALT

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    65.48      65.69

FILE 'REGISTRY' ENTERED AT 15:58:14 ON 24 JUL 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   23 JUL 2008  HIGHEST RN 1035697-56-3
DICTIONARY FILE UPDATES:  23 JUL 2008  HIGHEST RN 1035697-56-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:
```

http://www.cas.org/support/stngen/stndoc/properties.html

```
=> s l7
        321029 COBALT
L8           4 L6 AND COBALT

=> d all 1-4

L8   ANSWER 1 OF 4  REGISTRY  COPYRIGHT 2008 ACS on STN
RN   121589-36-4  REGISTRY
ED   Entered STN:  14 Jul 1989
CN   Iron, bis[μ-(cyano-C:N)][29H,31H-phthalocyaninato(2-)-
     N29,N30,N31,N32]bis[[29H,31H-phthalocyaninato(2-)-
     N29,N30,N31,N32](pyridine)cobalt]- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   29H,31H-Phthalocyanine, cobalt-iron complex
MF   C108 H58 Co2 Fe N28
CI   CCS
SR   CA
LC   STN Files:   CA, CAPLUS
DT.CA  CAplus document type:  Journal
RL.NP  Roles from non-patents:  PREP (Preparation)

Ring System Data
```

Elemental Analysis EA	Elemental Sequence ES	Size of the Rings SZ	Ring System Formula RF	Ring Identifier RID	RID Occurrence Count
C5N	NC5	6	C5N	46.156.30	2
C4N-C4N-C4N-C4N-C2CoN3-C2CoN3-C2CoN3-C6-C6-C6-C6	NC4-NC4-NC4-NC4-CoNCNCN-CoNCNCN-CoNCNCN-C6-C6-C6-C6	5-5-5-5-6-6-6-6-6-6-6-6	C32CoN8	13605.12.6	2
C4N-C4N-C4N-C4N-C2FeN3-C2FeN3-C2FeN3-C6-C6-C6-C6	NC4-NC4-NC4-NC4-FeNCNCN-FeNCNCN-FeNCNCN-C6-C6-C6-C6	5-5-5-5-6-6-6-6-6-6-6-6	C32FeN8	13605.36.1	1

```
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
               2 REFERENCES IN FILE CA (1907 TO DATE)
               2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE  1

AN   116:14698  CA
TI   Bridged mixed valence phthalocyaninato-metal compounds
AU   Hirsch, A.; Hanack, M.
CS   Inst. Org. Chem., Tuebingen, D-7400, Germany
SO   NATO ASI Series, Series E:  Applied Sciences (1990), 182(Conjugated Polym.
     Mater.:  Oppor. Electron., Optoelectron., Mol. Electron.), 163-9
     CODEN: NAESDI; ISSN: 0168-132X
DT   Journal
LA   English
CC   78-7 (Inorganic Chemicals and Reactions)
     Section cross-reference(s): 76
AB   Bridged mixed valence phthalocyaninato-metal dimers trimers and polymers
     (H2Pc = phthalocyanine, M = Fe, Co) with the central metal in the oxidation
     state of 2+ and 3+ and cyanide and pyrazine as bridging ligands have been
```

synthesized. The synthesis has been carried out either by coupling of PcM(L)CN (M = Fe, Co; L = py, pyrazine (pyz), tert-butylpyridine) with PcFe(NH3)2 and substituting the weak coordinated ammonia or by thermal decomposition of PcFe(pyz)CN. The IR, Moessbauer and elec. properties of these compds. have been investigated.

ST elec cond cobalt iron cyano phthalocyaninato; cobalt iron cyano phthalocyaninato pyridine pyrazine

IT Electric conductivity and conduction
(of cobalt or iron or cobalt-iron phthalocyaninato pyridine or pyrazine polymers with and without cyanide)

IT 74591-76-7
RL: PRP (Properties)
(Moessbauer spectrum of)

IT 84279-54-9, Cyanophthalocyaninatopyridinecobalt 94241-56-2, Cyanophthalocyaninatopyridineiron 136292-30-3 136313-95-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling reaction of, with iron ammine phthalocyaninato complex)

IT 136844-46-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling reaction of, with iron ammine phthalocyaninato complex and Moessbauer spectrum of)

IT 25232-77-3, Diamminephthalocyaninatoiron
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling reactions of, with iron and cobalt cyano phthalocyaninato complexes with and without pyridine or pyrazine)

IT 74-90-8DP, Hydrocyanic acid, complexes with iron and phthalocyanine and pyrazine 290-37-9DP, Pyrazine, complexes with iron and phthalocyanine with and without cyanide 574-93-6DP, Phthalocyanine, complexes with iron and pyrazine with and without cyanide 7439-89-6DP, Iron, complexes with phthalocyanine and pyrazine with and without cyanide
RL: SPN (Synthetic preparation); PREP (Preparation)
(mixed valence polymer, preparation of, by thermal reduction of iron cyano phthalocyaninato pyrazine complex)

IT 121589-35-3P 121589-36-4P 136313-94-5P 136339-67-8P 136844-44-5P 136844-45-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and elec. conductivity and Moessbauer spectrum of)

IT 136339-75-8
RL: PRP (Properties)
(thermal reduction and Moessbauer spectrum of)

REFERENCE 2

AN 111:49338 CA

TI Synthesis of bridged mixed valence macrocyclic metal compounds

AU Hanack, M.; Hirsch, A.
CS Inst. Org. Chem., Univ. Tuebingen, Tuebingen, Fed. Rep. Ger.

SO Synthetic Metals (1989), Volume Date 1988, 29(2-3), F9-F14
CODEN: SYMEDZ; ISSN: 0379-6779
DT Journal
LA English

CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 77

AB The bridged-mixed valence dimer (py)PcFeCNPcFe(NH3) (H2Pc = phthalocyanine) and the trimer (py)PcCoCNPcFeNCPcCo(py) were prepared by coupling reactions of PcFe(py)CN and PcCo(py)CN with PcFe(NH3)2. Elec. conductivity, FT-IR and Moessbauer spectroscopic data are reported and discussed.

ST elec cond cobalt iron phthalocyaninato; cobalt iron cyano phthalocyaninato trimer; iron cobalt cyano phthalocyaninato

IT Electric conductivity and conduction
(of cobalt-iron and iron-iron cyano phthalocyaninato complexes)

IT 84279-54-9, Cyano(phthalocyaninato)pyridinecobalt 94241-56-2, Cyano(phthalocyaninato)(pyridine)iron
RL: RCT (Reactant); RACT (Reactant or reagent)

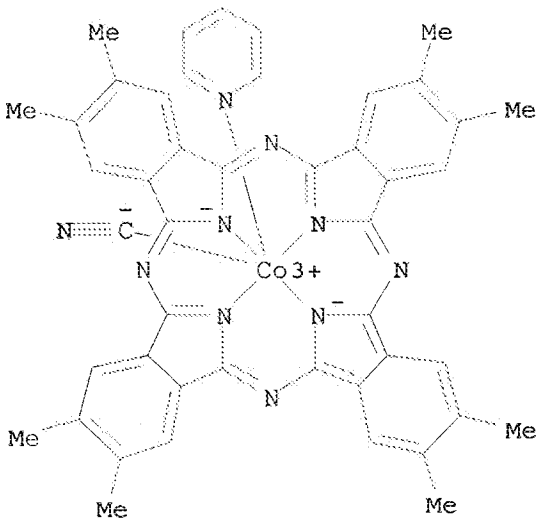
IT 84279-53-8
RL: PRP (Properties)
(elec. conductivity of)
IT 106188-21-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and elec. conductivity of)
IT 106157-28-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with thionyl chloride or sodium cyanide and oxygen)
IT 106188-18-5P 106210-64-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with water)
IT 106188-13-0P 106188-19-6P 106188-20-9P 106188-22-1P 106188-23-2P 106210-63-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 104935-13-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, elec. conductivity and reaction of, with butylamine or pyridine)
IT 105693-15-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, elec. conductivity and reaction of, with pyridine)
IT 106188-15-2P 106188-16-3P 106188-17-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, thermal decomposition and reaction of, with sodium cyanide)
IT 106188-14-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, thermal decomposition and reaction of, with sodium cyanide with and without water)
IT 7719-09-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with cobalt peripherally substituted phthalocyaninato complexes)
IT 27680-28-0 70619-85-1 88946-69-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with thionyl chloride or sodium cyanide and oxygen)
IT 35141-17-4, Dichloro(phthalocyaninato)cobalt 84279-51-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(thermal decomposition of)

L8 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2008 ACS on STN
RN 106188-21-0 REGISTRY
ED Entered STN: 17 Jan 1987
CN Cobalt, (cyano-C)[2,3,9,10,16,17,23,24-octamethyl-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32](pyridine)-, (OC-6-14)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 29H,31H-Phthalocyanine, 2,3,9,10,16,17,23,24-octamethyl-, cobalt complex
MF C46 H37 Co N10
CI CCS
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties)

Ring System Data

Elemental Analysis	Elemental Sequence	Size of the Rings	Ring System Formula	Ring Identifier	RID Occurrence

EA	ES	SZ	RF	RID	Count
C5N	NC5	6	C5N	46.156.30	1
C4N-C4N-C4N-C4N-C2CoN3-C2CoN3-C2CoN3-C2CoN3-C6-C6-C6-C6	NC4-NC4-NC4-NC4-CoNCNCN-CoNCNCN-CoNCNCN-CoNCNCN-C6-C6-C6-C6	5-5-5-5-6-6-6-6-6-6-6-6	C32CoN8	13605.12.6	1



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

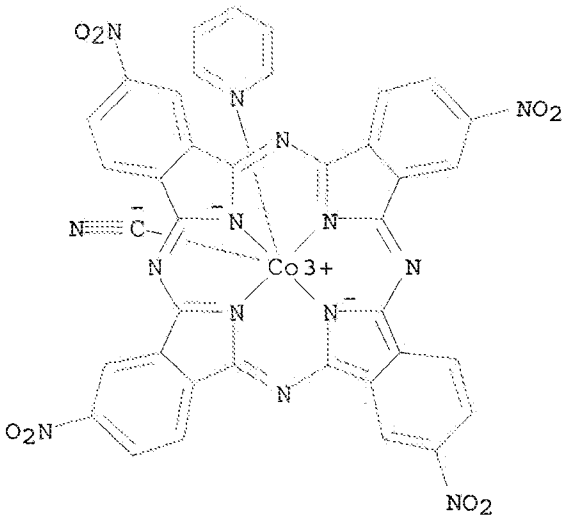
AN 106:42862 CA
TI Synthesis and properties of peripherally substituted phthalocyaninatocobalt complexes with bisaxially coordinated ligands
AU Hanack, Michael; Fay, Reinhold
CS Inst. Org. Chem., Univ. Tuebingen, Tuebingen, D-7400, Fed. Rep. Ger.
SO Recueil des Travaux Chimiques des Pays-Bas (1986), 105(10), 427-33
CODEN: RTCPA3; ISSN: 0165-0513
DT Journal
LA English
CC 78-7 (Inorganic Chemicals and Reactions)
AB The preparation and characterization of peripherally substituted phthalocyaninatocobalt compds., Co(RmPc)Cl2 and Na[Co(RmPc)(CN)2] (R = CH3, OMe, Cl, m = 8; R = tert-Bu, NO2, m = 4), are reported. The latter can be obtained via 2 methods: either by treatment of Co(RmPc)Cl2 with NaCN or by the reaction of Co(RmPc) with NaCN in the presence of O. Starting from Na[Co(RmPc)(CN)2] (R = CH3, m = 8; R = NO2, m = 4) the corresponding cyano-bridged polymers, [Co(RmPc)CN]n, were obtained. The IR, far-IR, UV-visible, 1H NMR (in part) and thermogravimetric/DTA data are discussed in detail for all the compds. prepared [Co{(CH3)8Pc}CN]n showed a powder conductivity of σRT 5 + 10-5 S/cm (E 0.22 eV), whereas [Co{(NO2)4Pc}CN]n has a much lower value, σRT3 + 10-9 S/cm.
ST cobalt phthalocyaninato deriv hexacoordinate; cond cobalt phthalocyaninato deriv polymer
IT Electric conductivity and conduction

(coupling reaction of, with iron ammine phthalocyaninato complex)
IT 25232-77-3, Diammine(phthalocyaninato)iron
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling reaction of, with iron and cobalt cyano pyridine phthalocyaninato complexes)
IT 88076-05-5, Cyano(phthalocyaninato)iron polymer
RL: PRP (Properties)
(elec. conductivity and Moessbauer spectrum of)
IT 84279-53-8, Cyano(phthalocyaninato)cobalt polymer
RL: PRP (Properties)
(elec. conductivity of)
IT 121589-35-3P 121589-36-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and elec. conductivity and Moessbauer spectrum of)

L8 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2008 ACS on STN
RN 106188-23-2 REGISTRY
ED Entered STN: 17 Jan 1987
CN Cobalt, (cyano-C)(pyridine)[2,9,16,23-tetranitro-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (OC-6-14)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 29H,31H-Phthalocyanine, 2,9,16,23-tetranitro-, cobalt complex
MF C38 H17 Co N14 O8
CI CCS
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

Ring System Data

Elemental Analysis EA	Elemental Sequence ES	Size of the Rings SZ	Ring System Formula RF	Ring Identifier RID	RID Occurrence Count
C5N	NC5	6	C5N	46.156.30	1
C4N-C4N-C4N-C4N-C2CoN3-C2CoN3-C2CoN3-C6-C6-C6-C6	NC4-NC4-NC4-NC4-CoNCNCN-CoNCNCN-CoNCNCN-C6-C6-C6-C6	5-5-5-5-6-6-6-6-6-6-6-6	C32CoN8	13605.12.6	1



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

AN 106:42862 CA
TI Synthesis and properties of peripherally substituted phthalocyaninatocobalt complexes with bisaxially coordinated ligands
AU Hanack, Michael; Fay, Reinhold
CS Inst. Org. Chem., Univ. Tuebingen, Tuebingen, D-7400, Fed. Rep. Ger.
SO Recueil des Travaux Chimiques des Pays-Bas (1986), 105(10), 427-33
CODEN: RTCPA3; ISSN: 0165-0513
DT Journal
LA English
CC 78-7 (Inorganic Chemicals and Reactions)
AB The preparation and characterization of peripherally substituted phthalocyaninatocobalt compds., Co(RmPc)Cl2 and Na[Co(RmPc)(CN)2] (R = CH3, OMe, Cl, m = 8; R = tert-Bu, NO2, m = 4), are reported. The latter can be obtained via 2 methods: either by treatment of Co(RmPc)Cl2 with NaCN or by the reaction of Co(RmPc) with NaCN in the presence of O. Starting from Na[Co(RmPc)(CN)2] (R = CH3, m = 8; R = NO2, m = 4) the corresponding cyano-bridged polymers, [Co(RmPc)CN]n, were obtained. The IR, far-IR, UV-visible, 1H NMR (in part) and thermogravimetric/DTA data are discussed in detail for all the compds. prepared [Co{(CH3)8Pc}CN]n showed a powder conductivity of σRT 5 + 10-5 S/cm (E 0.22 eV), whereas [Co{(NO2)4Pc}CN]n has a much lower value, σRT3 + 10-9 S/cm.
ST cobalt phthalocyaninato deriv hexacoordinate; cond cobalt phthalocyaninato deriv polymer
IT Electric conductivity and conduction
(of cobalt cyano polymeric complexes with peripherally substituted phthalocyaninate)
IT 36360-43-7, 4,5-Dimethylphthalonitrile
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation reaction of, in presence of cobaltous chloride)
IT 57-13-6, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation reaction of, with dichlorophthalic anhydride in presence of cobaltous chloride and ammonium molybdate)
IT 942-06-3, 4,5-Dichlorophthalic anhydride
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation reaction of, with urea in presence of cobaltous chloride and ammonium molybdate)

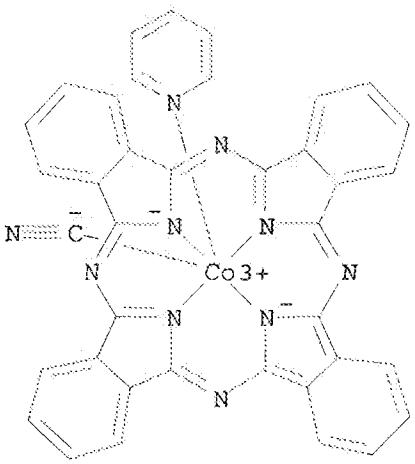
(of cobalt cyano polymeric complexes with peripherally substituted phthalocyaninate)
IT 36360-43-7, 4,5-Dimethylphthalonitrile
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation reaction of, in presence of cobaltous chloride)
IT 57-13-6, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation reaction of, with dichlorophthalic anhydride in presence of cobaltous chloride and ammonium molybdate)
IT 942-06-3, 4,5-Dichlorophthalic anhydride
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation reaction of, with urea in presence of cobaltous chloride and ammonium molybdate)
IT 84279-53-8
RL: PRP (Properties)
(elec. conductivity of)
IT 106188-21-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and elec. conductivity of)
IT 106157-28-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with thionyl chloride or sodium cyanide and oxygen)
IT 106188-18-5P 106210-64-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with water)
IT 106188-13-0P 106188-19-6P 106188-20-9P 106188-22-1P 106188-23-2P 106210-63-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 104935-13-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, elec. conductivity and reaction of, with butylamine or pyridine)
IT 105693-15-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, elec. conductivity and reaction of, with pyridine)
IT 106188-15-2P 106188-16-3P 106188-17-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, thermal decomposition and reaction of, with sodium cyanide)
IT 106188-14-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, thermal decomposition and reaction of, with sodium cyanide with and without water)
IT 7719-09-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with cobalt peripherally substituted phthalocyaninato complexes)
IT 27680-28-0 70619-85-1 88946-69-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with thionyl chloride or sodium cyanide and oxygen)
IT 35141-17-4, Dichloro(phthalocyaninato)cobalt 84279-51-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(thermal decomposition of)

L8 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2008 ACS on STN
RN 84279-54-9 REGISTRY
ED Entered STN: 16 Nov 1984
CN Cobalt, (cyano-C)[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32](pyridine)-, (OC-6-14)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 29H,31H-Phthalocyanine, cobalt complex

OTHER NAMES:
CN Cyano(phthalocyaninato)pyridinecobalt
MF C38 H21 Co N10
CI CCS
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties); RACT (Reactant or reagent)

Ring System Data

Elemental Analysis EA	Elemental Sequence ES	Size of the Rings SZ	Ring System Formula RF	Ring Identifier RID	RID Occurrence Count
C5N	NC5	6	C5N	46.156.30	1
C4N-C4N-C4N-C4N-C2CoN3-C2CoN3-C2CoN3-C6-C6-C6-C6	NC4-NC4-NC4-NC4-CoNCNCN-CoNCNCN-CoNCNCN-C6-C6-C6	5-5-5-5-6-6-6-6-6-6-6-6	C32CoN8	13605.12.6	1



8 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

AN 116:14698 CA
TI Bridged mixed valence phthalocyaninato-metal compounds
AU Hirsch, A.; Hanack, M.
CS Inst. Org. Chem., Tuebingen, D-7400, Germany
SO NATO ASI Series, Series E: Applied Sciences (1990), 182(Conjugated Polym. Mater.: Oppor. Electron., Optoelectron., Mol. Electron.), 163-9
CODEN: NAESDI; ISSN: 0168-132X
DT Journal
LA English
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 76
AB Bridged mixed valence phthalocyaninato-metal dimers trimers and polymers (H2Pc = phthalocyanine, M = Fe, Co) with the central metal in the oxidation state of 2+ and 3+ and cyanide and pyrazine as bridging ligands have been synthesized. The synthesis has been carried out either by coupling of

PcM(L)CN (M = Fe, Co; L = py, pyrazine (pyz), tert-butylpyridine) with PcFe(NH3)2 and substituting the weak coordinated ammonia or by thermal decomposition of PcFe(pyz)CN. The IR, Moessbauer and elec. properties of these compds. have been investigated.

ST elec cond cobalt iron cyano phthalocyaninato; cobalt iron cyano phthalocyaninato pyridine pyrazine

IT Electric conductivity and conduction
(of cobalt or iron or cobalt-iron phthalocyaninato pyridine or pyrazine polymers with and without cyanide)

IT 74591-76-7
RL: PRP (Properties)
(Moessbauer spectrum of)

IT 84279-54-9, Cyanophthalocyaninatopyridinecobalt 94241-56-2, Cyanophthalocyaninatopyridineiron 136292-30-3 136313-95-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling reaction of, with iron ammine phthalocyaninato complex)

IT 136844-46-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling reaction of, with iron ammine phthalocyaninato complex and Moessbauer spectrum of)

IT 25232-77-3, Diamminephthalocyaninatoiron
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling reactions of, with iron and cobalt cyano phthalocyaninato complexes with and without pyridine or pyrazine)

IT 74-90-8DP, Hydrocyanic acid, complexes with iron and phthalocyanine and pyrazine 290-37-9DP, Pyrazine, complexes with iron and phthalocyanine with and without cyanide 574-93-6DP, Phthalocyanine, complexes with iron and pyrazine with and without cyanide 7439-89-6DP, Iron, complexes with phthalocyanine and pyrazine with and without cyanide
RL: SPN (Synthetic preparation); PREP (Preparation)
(mixed valence polymer, preparation of, by thermal reduction of iron cyano phthalocyaninato pyrazine complex)

IT 121589-35-3P 121589-36-4P 136313-94-5P 136339-67-8P 136844-44-5P 136844-45-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and elec. conductivity and Moessbauer spectrum of)

IT 136339-75-8
RL: PRP (Properties)
(thermal reduction and Moessbauer spectrum of)

REFERENCE 2

AN 111:49338 CA

TI Synthesis of bridged mixed valence macrocyclic metal compounds

AU Hanack, M.; Hirsch, A.

CS Inst. Org. Chem., Univ. Tuebingen, Tuebingen, Fed. Rep. Ger.

SO Synthetic Metals (1989), Volume Date 1988, 29(2-3), F9-F14
CODEN: SYMEDZ; ISSN: 0379-6779

DT Journal

LA English

CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 77

AB The bridged-mixed valence dimer (py)PcFeCNPcFe(NH3) (H2Pc = phthalocyanine) and the trimer (py)PcCoCNPcFeNCPcCo(py) were prepared by coupling reactions of PcFe(py)CN and PcCo(py)CN with PcFe(NH3)2. Elec. conductivity, FT-IR and Moessbauer spectroscopic data are reported and discussed.

ST elec cond cobalt iron phthalocyaninato; cobalt iron cyano phthalocyaninato trimer; iron cobalt cyano phthalocyaninato

IT Electric conductivity and conduction
(of cobalt-iron and iron-iron cyano phthalocyaninato complexes)

IT 84279-54-9, Cyano(phthalocyaninato)pyridinecobalt 94241-56-2, Cyano(phthalocyaninato)(pyridine)iron
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling reaction of, with iron ammine phthalocyaninato complex)

IT 25232-77-3, Diammine(phthalocyaninato)iron
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling reaction of, with iron and cobalt cyano pyridine phthalocyaninato complexes)
IT 88076-05-5, Cyano(phthalocyaninato)iron polymer
RL: PRP (Properties)
(elec. conductivity and Moessbauer spectrum of)
IT 84279-53-8, Cyano(phthalocyaninato)cobalt polymer
RL: PRP (Properties)
(elec. conductivity of)
IT 121589-35-3P 121589-36-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and elec. conductivity and Moessbauer spectrum of)

REFERENCE 3

AN 104:27809 CA
TI Synthesis and properties of conducting bridged macrocyclic metal complexes
AU Hanack, Michael
CS Inst. Org. Chem., Univ. Tuebingen, Tuebingen, D-7400, Fed. Rep. Ger.
SO Israel Journal of Chemistry (1985), 25(3-4), 205-9
CODEN: ISJCAT; ISSN: 0021-2148
DT Journal
LA English
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 76
AB Stacked bridged [MQ(μ-L)]n (M = Fe, Ru; L = pyrazine, 1,4-diisocyanobenzene; H2Q = phthalocyanine (H2Pc), tetrabenzoporphyrine (H2TBP)) were doped with I. The properties and conductivities of the doped compds. [MQ(μ-L)]n are reported. The preparation and properties of [MPc(μ-CN)]n (M = Co, Rh, Fe, Mn, Cr) are described. The Co and Fe coordination polymers show room temperature conductivities .apprx.10-2 S/cm without doping, which are in the same range as the I-doped [MPc(μ-L)]n-compds. [PcCo(SCN)]n and [TBPCoCN]n are also described.
ST transition metal macrocycle bridged conductor; pyrazine transition meal macrocycle conductor; diisocyanobenzene transition metal macrocycle conductor; phthalocyanine transition metal bridged conductor; benzoporphyrine transition metal bridged conductor; iodine doped metal complex cond
IT Transition metals, compounds
RL: RCT (Reactant); RACT (Reactant or reagent)
(conducting polymeric complexes with phthalocyanine and tetrabenzoporphyrin)
IT Electric conductivity and conduction
(of transition metal phthalocyanine and tetrabenzoporphyrin polymers)
IT 86493-46-1D, oxidized, pentaiodide, ([Fe(C32H16N8)(C8H4N2)].0.28I5) 86885-54-3D, oxidized, pentaiodide, ([Fe(C36H20N4)(C8H4N2)].0.34I5) 87156-20-5 90654-28-7D, oxidized, pentaiodide, ([Ru(C32H16N8)(C8H4N2)].0.4I5) 90654-30-1D, oxidized, pentaiodide, ([Fe(C32H16N8)(C12H12N2)].0.6I5) 90669-43-5D, oxidized, pentaiodide, ([Fe(C32H16N8)(C8Cl4N8)].0.53I5)
RL: PRP (Properties)
(elec. conductivity of)
IT 86493-46-1 86885-54-3 90654-30-1 90669-43-5
RL: PRP (Properties)
(iodine doping and elec. conductivity of)
IT 58482-09-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxygen oxidation of, in presence of cyanide)
IT 84279-53-8DP, oxidized, pentaiodide ([Co(C32H16N8)(CN)].0.32I5) 88076-05-5P 88076-07-7P 92997-88-1P 96030-72-7P 99596-81-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and elec. conductivity of)
IT 84279-54-9P 90654-31-2P 90654-53-8P 90699-93-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(preparation and thermolysis of)
IT 90654-54-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, iodine doping and thermolysis of)
IT 90383-69-0P 90654-33-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, thermolysis and elec. conductivity of)
IT 84279-53-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, thermolysis, elec. conductivity and reaction with nitrogen bases)
IT 35141-17-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with thiocyanate)
IT 14285-56-4 14285-57-5 53432-32-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with cyanide)

REFERENCE 4

AN 101:31666 CA
TI Synthesis and properties of conducting bridged macrocyclic metal complexes
AU Hanack, Michael
CS Inst. Org. Chem., Univ. Tuebingen, Tuebingen, D-7400, Fed. Rep. Ger.
SO Molecular Crystals and Liquid Crystals (1984), 105(1-4), 133-49
CODEN: MCLCA5; ISSN: 0026-8941
DT Journal
LA English
CC 76-2 (Electric Phenomena)
AB Stacked bridged macrocyclic metal complexes with pyrazine and 1,4-diisocyanobenzene as the bridging ligands (L), phthalocyanine and tetrabenzoporphine as the macrocycle (Mac), and Fe and Ru as the central metal atoms M were doped with I. The properties and conductivities of the doped compds. [MacML]n are reported. The synthesis and properties of Type-C polymers ([PcMCN]n, M = Co, Fe, Mn, Cr) with CN as the bridging ligand are described. With Co and Fe these polymers exhibit room-temperature conductivities of .apprx.10-2 S/cm without doping, which is in the same range as the I-doped [PcML]n compds.
ST cond macrocyclic metal complex; iron macrocyclic complex cond; ruthenium macrocyclic complex cond; cobalt macrocyclic complex cond; manganese macrocyclic complex cond; chromium macrocyclic complex cond
IT Electron spin resonance
Moessbauer effect
Nuclear magnetic resonance
(in bridged macrocyclic metal complexes)
IT Electric conductivity and conduction
(in bridged macrocyclic metal complexes doped with iodine)
IT Infrared spectra
Raman spectra
Ultraviolet and visible spectra
(of bridged macrocyclic metal complexes)
IT 7553-56-2, properties
RL: PRP (Properties)
(elec. conduction in bridged macrocyclic metal complexes doped with)
IT 74591-77-8P 84279-53-8P 84279-54-9P 86493-46-1P 86885-54-3P
88076-05-5P 88076-07-7P 90383-69-0P 90654-28-7P 90654-30-1P
90654-31-2P 90654-33-4P 90654-53-8P 90654-54-9P 90669-43-5P
90699-93-7P
RL: PREP (Preparation)
(preparation and elec. conduction in)

REFERENCE 5

AN 101:16221 CA

TI Synthesis and conductivities of (μ-cyano)phthalocyaninatometal compounds
AU Datz, Armin; Metz, Josef; Schneider, Otto; Hanack, Michael
CS Inst. Org. Chem., Univ. Tuebingen, Tuebingen, D-7400/1, Fed. Rep. Ger.
SO Synthetic Metals (1984), 9(1), 31-40
CODEN: SYMEDZ; ISSN: 0379-6779
DT Journal
LA English
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 76
AB [PcMCN]n (H2Pc = phthalocyanine, M = Fe, Mn, Cr, Co) and [HPcFeCN]n were prepared The compds. were characterized by IR, far-IR, UV, thermal, and elemental anal., and partly by 1H NMR and field-desorption mass spectroscopy. [PcCoCN] and [PcFeCN]n exhibit d.c. room temperature conductivities .apprx.10-2 S/cm without doping, thereby showing conductivities which are in the same range as the iodine-doped [PcSiO]n.
ST cond phthalocyanine cyano transition metal; cobalt phthalocyanine cyano; manganese phthalocyanine cyano; iron phthalocyanine cyano; chromium phthalocyanine cyano
IT Electric conductivity and conduction
(of transition metal cyanophthalocyanine monomers and polymers)
IT 84279-54-9 84279-55-0 84279-56-1 84303-13-9
RL: PRP (Properties)
(dark conductivity of)
IT 3317-67-7 14285-60-0 14325-24-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, in presence of cyanide)
IT 89527-87-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, spectra and thermal anal. of)
IT 84279-51-6P 84279-53-8P 88055-69-0P 88076-05-5P 88076-07-7P 90364-11-7P 90364-12-8P 90383-69-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, spectra, dark conductivity and thermal anal. of)
IT 14285-56-4 47838-42-6 53432-32-9 53466-60-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with alkali metal cyanide in ethanol)

REFERENCE 6

AN 100:28832 CA
TI Synthesis and properties of conducting bridged macrocyclic metal complexes
AU Hanack, M.; Datz, A.; Kobel, W.; Koch, J.; Metz, J.; Mezger, M.; Schneider, O.; Schulze, H. J.
CS Inst. Org. Chem., Univ. Tuebingen, Tuebingen, D-7400, Fed. Rep. Ger.
SO Journal de Physique, Colloque (1983), (C3, Conf. Int. Phys. Chim. Polym. Conduct., 1982), 633-7
CODEN: JPQCAK; ISSN: 0449-1947
DT Journal
LA English
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 76
AB FePcL2 and [FePcL]n (H2Pc = phthalocyanine; L = 1,4-diazabicyclo[2.2.2]octane) were prepared from PcFe and L in a melt or in CHCl3, resp. [FePcL]n has an elec. conductivity 4-fold less than that of [FePcL1]n (L1 = pyrazine (pyz), 1,4-di(isocyano)benzene) and [FeQ(pyz)]n (H2Q = octamethylphthalocyanine, octamethoxyphthalocyanine). [RuPc(pyz)]n was prepared and has an elec. conductivity of 1 + 10-5 S cm-1, less than that of [FePc(pyz)]n. [FeQ1(pyz)]n (H2Q1 = tetraphenylporphine, dihydrodibenzo[b,i]-1,4,8,11-tetraza[14]annulene) were also prepared and have an elec. conductivity of 4 + 10-9 and .apprx.1 + 10-5 S cm-1, resp. CoPcCl2 was refluxed with MCN (M = Na, K) in EtOH to give M[CoPc(CN)2] which on heating in H2O gave [CoPc(CN)]n with an elec. conductivity comparable to that for doped analogs of μ-oxo and μ-fluoro polymers.

[MnPc(CN)]n was prepared as above for [CoPc(CN)]n. [FePc(CN)]n and [FeHPc(CN)]n are also conductivity

ST transition metal phthalocyanine polymer cond; manganese porphyrin deriv polymer conducting; cobalt porphyrin polymer conducting; iron porphyrin polymer conducting; ruthenium porphyrin polymer conducting

IT Electric conductivity and conduction
(of transition metal phthalocyanine polymeric complexes)

IT Transition metals, compounds
RL: RCT (Reactant); RACT (Reactant or reagent)
(phthalocyanine polymeric complexes, elec.-conducting)

IT 74591-77-8 86493-46-1 87208-57-9 87208-59-1 88055-69-0 88076-05-5
RL: PRP (Properties)
(elec. conductivity of)

IT 84279-53-8P 86493-48-3P 86508-44-3P 87189-21-7P 88055-70-3P 88076-07-7P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and elec. conductivity of)

IT 84279-51-6P 87195-52-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and thermolysis of)

IT 84279-54-9P 84279-55-0P 84279-56-1P 84303-13-9P 86512-19-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 47838-42-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with alkali metal cyanides)

IT 132-16-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with diazabicyclooctane)

IT 16591-56-3 50792-65-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with pyrazine)

REFERENCE 7

AN 99:131766 CA

TI Synthesis and properties of conducting bridged macrocyclic metal complexes

AU Hanack, Michael; Kobel, Wolfram; Koch, Juergen; Metz, Josef; Schneider, Otto; Schulze, Hans Joachim

CS Inst. Org. Chem., Univ. Tuebingen, Tuebingen, D-7400, Fed. Rep. Ger.

SO Molecular Crystals and Liquid Crystals (1983), 96(1-4), 263-70
CODEN: MCLCA5; ISSN: 0026-8941

DT Journal

LA English

CC 76-1 (Electric Phenomena)

AB The synthesis and the properties of polymeric phthalocyaninatometal complexes are described. In addition to pyrazine and 1,4-diisocyanobenzene, the cyano group is used as a bridging ligand leading to μ-cyanophthalocyaninatocobalt(III). The μ-cyanophthalocyaninatocobalt(III) shows a conductivity of 10-2 S cm-1 (powder, compressed pellets) at room temperature without I-doping.

ST cond macrocyclic metal complex; iron macrocyclic complex cond; ruthenium macrocyclic complex cond; cobalt macrocyclic complex cond; phthalocyaninatometal complex elec cond

IT Electric conductivity and conduction
(of bridged macrocyclic metal complexes)

IT 74558-67-1 74591-77-8 81315-39-1 81610-44-8 84279-54-9 84279-55-0 84279-56-1 84303-13-9 86493-46-1 86493-48-3 87189-21-7 87195-51-5 87208-57-9 87208-59-1
RL: PRP (Properties)
(elec. conductivity of)

IT 84279-51-6P 84279-53-8P 86508-44-3P 86512-19-8P 87195-52-6P
RL: PREP (Preparation)

(preparation of)
IT 132-16-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with 1,4-diazobicyclo[2.2.2]octane)
IT 35141-17-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with alkali-metal cyanides)
IT 50792-65-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with pyrazine)

REFERENCE 8

AN 98:82771 CA
TI Synthesis, characterization, and conductivity of (μ-cyano)(phthalocyaninato)cobalt(III)
AU Metz, Josef; Hanack, Michael
CS Inst. Org. Chem., Univ. Tuebingen, Tuebingen, D-7400, Fed. Rep. Ger.
SO Journal of the American Chemical Society (1983), 105(4), 828-30
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 76
AB Evidence for the synthesis of (μ-cyano)(phthalocyaninato)cobalt(III), [PcCoCN]n via splitting off NaCN from sodium dicyano(phthalocyaninato)cobaltate(II), NaPcCo(CN)2, is presented. Treatment of [PcCoCN]n with base mols. L like pyridine, 2-methylpyrazine, piperidine, and butylamine leads to monomeric complexes PcCoCN(L). All compds. are characterized by IR, far-IR, UV, and 1H NMR spectroscopy, thermal and elemental analyses, and partly by FD mass spectroscopy. The IR data are discussed in detail. The undoped polymer [PcCoCN]n exhibits d.c.-dark conductivities around 10-2 S/cm. When the polymeric structure was decomposed by treatment with a competing ligand, the conductivity was diminished by 6-10 orders of magnitude.
ST cobalt cyano phthalocyaninato complex; cond cobalt cyano phthalocyaninato
IT Electric conductivity and conduction
(of (μ-cyano)(phthalocyaninato)cobalt polymer)
IT 84279-53-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and amine adduct formation with)
IT 84279-51-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and sodium cyanide removal from)
IT 84279-54-9P 84279-55-0P 84279-56-1P 84303-13-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 3317-67-7 47838-42-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with sodium cyanide)
IT 143-33-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of, with cobalt phthalocyananto complexes)

=> d his

(FILE 'HOME' ENTERED AT 15:52:57 ON 24 JUL 2008)

FILE 'REGISTRY' ENTERED AT 15:53:17 ON 24 JUL 2008
L1 17947 S PHTHALOCYANINE
L2 17948 S (PHTHALOCYANINE OR PHTHALOCYANATO)
L3 1578 S L2 AND COBALT
L4 613 S L2 AND (WATER OR ETHANOL OR METHANOL OR PYRIDINE)
L5 30 S L4 AND (ISOCYANAT? OR CYANO)
L6 15 S L5 NOT POLYMER

```
L7             4 S L6 AND COBALT

     FILE 'REGISTRY' ENTERED AT 15:58:14 ON 24 JUL 2008
L8             4 S L7

=> d his

     (FILE 'HOME' ENTERED AT 15:52:57 ON 24 JUL 2008)

     FILE 'REGISTRY' ENTERED AT 15:53:17 ON 24 JUL 2008
L1         17947 S PHTHALOCYANINE
L2         17948 S (PHTHALOCYANINE OR PHTHALOCYANATO)
L3          1578 S L2 AND COBALT
L4           613 S L2 AND (WATER OR ETHANOL OR METHANOL OR PYRIDINE)
L5            30 S L4 AND (ISOCYANAT? OR CYANO)
L6            15 S L5 NOT POLYMER
L7             4 S L6 AND COBALT

     FILE 'REGISTRY' ENTERED AT 15:58:14 ON 24 JUL 2008
L8             4 S L7

=> log y
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    28.27      93.96

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -3.00      -3.00

STN INTERNATIONAL LOGOFF AT 15:59:41 ON 24 JUL 2008
```